

Reply to Office Action of: 6/18/03



Claims 1-11 of the application are being withdrawn as drawn to a non-elected invention, withdrawal being without prejudice to Applicant's right to present such claims in a continuing application. Claim 12 has been canceled, having been replaced by new claim 19 in order to more particularly point out the invention. Claims 13-18 have been amended to depend from new claim 19 and to respond to a rejection herein under 35 U.S.C. §112, second paragraph.

Claims 13-19 thus remain under examination in this case. Reconsideration of this application in view of these amendments and the following remarks is respectfully requested.

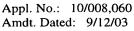
Claim 18 of the application was rejected under 35 U.S.C. §112 on the ground of indefiniteness. The phrase objected to by the Examiner has been clarified based on disclosure at page 2, lines 30-31 of the specification. Favorable reconsideration of claim 18 in light of this clarification is requested.

Claims 12-14 and 16-18 of the application were rejected under 35 U.S.C. §103 as unpatentable over Brown, U.S. Patent No. 2,972,669, taken with Swars, U.S. Patent No. 5,411,711. This rejection is respectfully traversed for the following reasons.

As background, the present invention relates to a method for manufacturing catalyst substrates with shaped inlet and/or outlet faces (page 2, lines 8-9 of the specification). Face shapes that can be provided include convex conical or frusto-conical faces (page 2, lines 14-15 of the specification, and Figs. 2-11 of the drawings).

The inventive method involves rotating a length of cutting filament about the substrate on a path that defines the conical or frusto-conical shaped surface to be provided (page 3, lines 1-20 of the specification). This is accomplished by rotating a pair of wire guides, between which the cutting filament is disposed, about the longitudinal axis of the substrate. The cutting filament is oriented to pass transversely through the longitudinal axis and periphery of the substrate during this rotation, thereby removing substrate material in a manner that conically shapes the substrate inlet and/or outlet face. The various conical face configurations are provided simply by controlling the longitudinal separation and radial spacing of the guides from the substrate axis (page 2, lines 25-31 of the specification and Fig. 13 of the drawings).

Applicant defines a "conical" surface in the conventional way as a surface of a solid that is bounded by a base plane and formed by a line segment joining every point of the boundary of the base to a common vertex. For the catalyst substrate, the common vertex is



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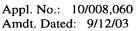
the apex or projected apex of the conical surface to be generated. In some cases that apex lies on the longitudinal axis of the catalyst substrate, i.e., the central axis extending along the substrate's length, so that the shaped face is concentric with that axis (disclosed at page 7, lines 15-16 of the specification and exemplified in Figure 4 of the drawings). Alternatively, the vertex of the cone may be spaced laterally from the longitudinal axis so that the conical surface is offset from and thus non-concentric with that longitudinal axis (page 2, lines 30-31 of the specification and Figure 8 of the drawings).

It is apparent from the foregoing description that the present invention is centered on the concept of cutting a workpiece with a laterally traversing filament or wire carried by a pair of wire guides that rotate about or orbit an axis of the workpiece. The step of cutting a workpiece with a wire strung between two orbiting wire guides is nowhere taught or suggested in Brown or any of the other art cited by the Examiner in this case. In particular, Brown discloses only apparatus and a method for band-sawing a workpiece via electrical discharge machining, with only one moveable wire guide and with neither wire guide rotating about an axis of the workpiece. That is, Brown's cutting wire travels longitudinally, but the only lateral movement of the wire through the workpiece results from lateral movement of the workpiece against the moving wire, not from rotational movement of the wire guides. Thus, whether used to shape a catalyst substrate or otherwise, the operation of Brown's device could not anticipate or suggest the Applicant's method.

The Examiner cites Swars to disclose catalytic substrates clearly omitted from the disclosure of Brown. However, the Applicant finds no reference whatever in Swars to the fashioning of substrates with conically configured end faces. In the absence of express suggestions to the contrary, therefore, Swars would be understood by the expert to disclose only conventional planar end faces.

On the above basis the Applicant respectfully contends that her method is neither taught nor remotely suggested by Brown taken with Swars, and therefore that new claim 19 clearly patentable over those references. The Applicant's further claims, all being dependent from newly added claim 19, are therefore patentable on the same basis. For these reasons, reconsideration and withdrawal of all outstanding rejections on reference to Brown and Swars, as well as the rejection of claim 15 further in view of U.S. Patent No. 4,208,9313 to Collins, are respectfully requested.

In light of the foregoing amendments and remarks, the Applicants respectfully submit that remaining claims 13-19 of this application are now in condition for allowance.



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Accordingly favorable reconsideration of this application and allowance of those remaining claims are courteously solicited.

Applicants believe that no extension of time is necessary to make this Reply timely, but contingently request that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as is necessary to make this Reply timely, if in fact such an extension is required. In that contingency the Office is hereby authorized to charge any necessary extension fee or surcharge to the deposit account of Corning Incorporated, Deposit Account 03-3325.

Respectfully submitted,

DATE: September 12, 2003

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SP-TI-03-1

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